



# Medical Terminology: Introduction to the Integumentary System

**Illinois CTE Endorsement Area:  
Health Science Technology & Human Services**  
*Teacher and Student Editions*

Original Lesson Developers: S. Anjur, N. Brennan, and S. Saiyed  
ILCTE Leader, Nance Budde  
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Converted to Format by Karen Aldworth  
Current Phase of Lesson: Phase 3 of 5



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**Overview:**

Learn the many miraculous things that your skin does for you! Through various activities including a skin poster, you will learn all the things that the largest organ in your body does to protect you and keep you healthy.

**Classes or Discipline:**

- All Health Science Career Pathways

**Career Cluster:**

- [Health Science](#)

**Illinois CTE Endorsement Area:**

- [Health Science](#)

**Grade Level(s):**

- Grades 10 - 12

**Suggested Days/Minutes:** To complete all of the activities will require a minimum of 1 week of class time. The activities can be modified for home assignments.

**This is an extremely detailed lesson if all activities are completed.**

**Learning Objectives:**

- Explain the functions of the skin.
- Differentiate between the layers of the skin: epidermis, dermis, hypodermis.
- Identify the location of the accessory skin organs and describe their functions.
- Interpret medical terms of dermatology for verbal and written communication in a health care setting.
- Use word elements to construct medical terms associated with dermatology.
- Deconstruct medical terms associated with dermatology into their word elements.

**Standards Addressed:**

- [National Health Science Standards](#)
  - 2.2 Medical Terminology
    - 2.2.1 Use common roots, prefixes and suffixes to communicate information.
- **Common Core Learning Standards:**
  - CC.K-12.L.R.5: Vocabulary Acquisition and Use: Demonstrate understanding of word relationships and nuances in the word meaning.
  - CC.K-12.SL.4: Presentation of Knowledge and Ideas: Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, and style are appropriate to task, purpose, and audience.

### Enduring Understandings:

- Knowledgeable with medical terminology for future health career careers and courses.
- Correlate knowledge necessary for career in healthcare fields.
- Ability to communicate with healthcare professionals if they are ever a patient themselves.
- Document safe quality patient care related to dermatology.
- Interpret medical records during health encounters.

### Resources and References:

1. Device with internet connectivity
2. Letter size paper or butcher paper for Sports poster (colored and white)
3. Colored pencils, pens &/or markers
4. Videos:  
[My life without skin](#) (9+ minutes)  
[Kids Health: Skin \(6:28\)](#)
5. Website  
[Word It Out](#)
6. Tissue as the 2 videos being shown are very powerful and emotional.
7. [Skin Coloring Diagram](#)  
Kapit, W., & Elson, L. (1977) *The Anatomy Coloring Book*. N.Y., NY: Harper and Row
8. [Skin and Sports Trainer Sheet](#)
9. [Skin and Sports Lesson and Activities](#)

### Essential Employability Skills:

There are four [essential employability skills](#)

- Personal Ethic: integrity, respect, perseverance, positive attitude
- Work Ethic: dependability, professionalism
- Teamwork: critical thinking, effective and cooperative work
- Communication: active listening, clear communication

The focus of this lesson is on critical thinking, effective and cooperative work, active listening and clear communication.

Skill	How it is addressed:
Critical Thinking	Asking students to "think" how they would feel if born without any skin. How would their life, environment, etc. have to change to accommodate this condition? <b>Engage: Option 2, 3 &amp; 4</b>
Effective and Cooperative Work	Working in pairs or small groups requires each member to be cooperative and work effectively with each other. <b>Explore Part I &amp; II</b> <b>Elaborate</b>
Active Listening	Students will demonstrate their ability to listen & follow directions correctly. <b>Engage Option 1</b> <b>Explore Part II 3</b>
Clear Communication	Clear communication within their pair or group during activities. This will help facilitate collaboration within the pair or group. <b>Engage Option 2 #3</b> <b>Explore Part I (skin exploration lab)</b> <b>Explore Part II (match structure to function)</b> <b>Elaborate: Poster</b>

### **Suggested Differentiation Strategies:**

- The activities in the Explore section can be adapted for all levels of learners.
- Differentiation on Sports posters that is appropriate to their age and learning ability.
- Content assigned more weight than creative design for all learners.

Throughout this lesson the teacher notes and comments are in red.

## **1. Engage: (30 minutes)**

### **Part 1**

1. You will now take a pre-lesson quiz. Do your best!  
**You will find the pre/post quiz at the end of this lesson.**

### **Part 2**

**You are given two options for this activity, please choose the option that best works for your students.**

#### **Option 1:**

1. You are going to watch a very emotional video, please take a few minutes to prepare yourself for experience that you may encounter when you enter the health care pathway. Watch [My life without skin](#) (9+ minutes) on your device or together as a class.
2. Take notes and be prepared to share your feelings on the following:
  - a. Imagine yourself with no skin.
  - b. What would it feel like to not have any skin on your body?
  - c. What daily habits or routines would you have to change?
  - d. What would you have to do to adapt to your environment?
  - e. What changes would you need to make in your environment?

**Help facilitate the discussion with your students. Ask your students to step into the life of Moin. Yes, this video is a little longer than 9 minutes, but you are introducing the Integumentary System. Let them be able to visualize how life would be without having any skin.**

3. Now take turns coming to the whiteboard. Pick one question from the list below and write one sentence on how this would feel if it was YOU.
  - a. What changes would you need to make?
  - b. Is it life-limiting?
  - c. How would you cope?
  - d. Family support? What would you need from your family to survive?

**This should be an emotional topic for your students. Have a tissue ready. It is an intense way to start this Integumentary System lesson. Allow time for all students to be able to express their feelings.**

#### **Option 2:**

1. Watch this animated video about the integumentary system:  
[Kids Health: Skin \(6:28\)](#)
2. While watching the video, write down at least 5 medical terms you hear.
3. Once the video is over, you will work in groups of 2-3 to compare and contrast the terms you have identified and list them on the worksheet provided to your group.  
**The worksheet is found at the end of this lesson**
4. After you have created the list of all the terms, deconstruct each term to identify the word elements: prefixes, root words, and suffixes. Using your textbook, provide the meaning of each word element.

5. After each group has finished compiling their list of medical terms, you will share your list with the rest of the class to identify the most commonly identified medical terms from the video.

You may choose to allow your students to pick their own groups or you may wish to pre-assign students to groups of 2-3. The student worksheet is found at the end of the lesson. Provide adequate time for students to share the medical terms they identified from the video, to deconstruct the words into the correct word elements and to look up the meanings of the word elements. Once all the groups have finished, create a list for the whole class. Begin by having one group write their list on the white board or you can have one group verbally provide the words as you write them. Ask each group to add any words from their list that are not already present on the class list. You can choose how you want to display the list; some options are to write them on a white board, project the list using an overhead projector or display the list using any other technology available to you. Another option you can choose to use is an online “word cloud” generator like [Word It Out](#) which will create a word cloud with the most common words appearing larger in the cloud. If you choose to create a word cloud, you will need each group to provide all their words, not just words that are not already on the list.

### **Additional optional activities to use at teacher discretion:**

#### **Option 1:**

1. You are going to draw a model of the skin by reading a description of the anatomy of skin and without using any other resources.

Students draw a model of the skin from reading a description without using any other resources. The narrative is located at the end of the lesson.

#### **Option 2:**

1. Working in pairs, one student will be doing the drawing of a skin diagram based on how your partner verbally describes it.

2. The partner describing the skin diagram will have a narrative and picture for the skin drawing given to them by your teacher or located in their textbook.

This narrative is found at the end of this lesson. You may also use a picture from your textbook. Be sure to give the student reader the page number you want them to use.

3. The partner doing the drawing will NOT see a picture but must draw the skin diagram based on their partner’s description.

You may also choose to provide a different diagram to your students if your class does not utilize a specific textbook or you feel the diagram in the text is too simple or too complex for your students.

### **2. Explore: (70 minutes)**

\*\*\*The Explore section contains two activities. The first activity provides the students the opportunity to learn about the different structures of the skin and the medical terminology associated with the skin. The second activity allows the students to explore the functions of the structures they learned from the 1st activity.

## Part I: (30 minutes)

1. You will color a diagram of the skin. Read steps 1 and 2 on the coloring page before you begin as it provides specific instructions about what colors you should use for certain skin structures.
2. Color each word with the same color you used to color the structure on the diagram.
3. Once you have colored the diagram, use your textbook and/or additional resources to deconstruct the medical terms, provide the meaning of the word elements, and research the function of each of the skin structures.

Allow students to use their textbook or a connective device to research the answers. The skin coloring sheet link is below. The format of the coloring page is similar to "Paint by Numbers." Each word has a subscript letter that corresponds with a structure in the diagram. Students should color both the word and the structure using the same color. The colored words become a "key" for the diagram. The diagram contains many of the same structures but not every structure will be labeled with a letter. Students should still color these structures accordingly. For example, only one hair shaft is labeled with a subscript letter but students should color all of the hairs in the diagram using the same color.

While rounding your classroom, make sure that they are coloring the skin layer(s) correctly, coloring and identifying the skin structures and may need help deconstructing the words.

The deconstruction and research sheet are at the end of this lesson.

### [Skin Coloring Diagram](#)

Kapit, W., & Elson, L. (1977). *The Anatomy Coloring Book*. N.Y., NY: Harper and Row.

## Part 2: (40 minutes)

Before you begin this activity, you will need cut different colored paper into strips. Write a different structure and function on each strip of paper. Be sure to include the different layers of the skin, as well as, all of the accessory structures relating to the skin.

A document with structures and matching functions are located at the end of the lesson. Copy onto colored paper and cut them out to make strips, whichever is easier for you.

You will give each student a strip of colored paper which will contain one structure or one function of the skin. Instruct students to interact with each other so they can find their matches.

1. You will receive a piece of colored paper either indicating a skin structure or the function/description of a specific skin structure. Each student will receive a different structure or function. You must locate the student whose slip matches your structure or function. You can travel around the room to make your matches. Once you have found your match, confirm with your teacher.
2. Now that you have found your match, you will be partnered together for the next activity.
3. You will each be given a worksheet to complete for this next activity.  
Have the students complete the worksheet which can be found at the end of the lesson.

4. Once all students have found their match, one student from each pair will form an outer circle and the other students will form an inner circle, being sure to sit directly across from your partner.
5. Now enter your pair's information onto your worksheet.
6. When prompted by the teacher, students in the outer circle will move one chair to their left. Now you will be matched up with a new student and you will be given one minute to share your structure and its function. Enter the new information onto your worksheet.
7. The outer circle will continue to move until the entire worksheet is complete.  
**Depending on your class size and student population, you may choose to have the students work in partners. If you choose to have the students work in partners, give each pair 2 strips of paper and be sure not to give each pair a matching structure and function. You may then have the students work as pairs to identify functions with structures.**

### **3. Explain: (55 minutes)**

#### **Part I: (15 minutes)**

1. Working with a partner, choose 2 terms that you can now easily relate to the Integumentary System and deconstruct both terms into their word elements. Be prepared to go to the whiteboard to write your 2 terms and how you deconstructed the terms. Once your words are displayed, share 1 reason why they are now easier for you to relate to this lesson. Try not to duplicate any of your classmates' answers.  
**If you have limited space on your whiteboard, you may consider using a digital platform. Jamboard has a free version you can use: <https://jamboard.google.com/>**

**Encourage students to relate what terms are easier for them to remember. Perhaps, you will be able to identify a pattern to remediate those terms that are more difficult.**

#### **Part 2: (40 minutes)**

1. On a sheet of paper, answer the following questions:
  - a. What are 3 of the functions of the dermis?
  - b. Identify the structures related to these functions of the dermis.

**Answers can range from the following:**

- 1) experience touch, pressure, pain, and temperature: nerve/sensory receptors
  - 2) oil production: sebaceous gland
  - 3) produce hair: hair follicle
  - 4) piloerection (goosebumps for heat conservation): arrector pili muscle
  - 5) temperature regulation: sweat glands
  - 6) nutrient/waste exchange, temperature regulation: blood vessels
  - 7) enhance storage of Vitamin D by the body: Vitamin D synthesis
2. Once all students have completed the questions, pass your piece of paper to the person sitting on your right. As a class, review your answers.



3. Using your worksheet, review and verify your classmates' responses.
4. If something is incorrect, give that student the correct answer.

#### **4. Elaborate/Extend: (60 minutes)**

Divide the class into pairs or small groups of 3. Direct the pairs or groups to create a poster focused on one of the five sports; football, running, skiing, swimming or tennis. The poster should cover the potential risks the sport poses to healthy skin and ways to prevent them. Display posters in the classroom for the class to discuss and enjoy.

#### **Pre-activity Discussion/Brainstorm :**

Lead your class in a discussion on 1-3 below. You want them thinking about sports.

1. In pairs or small groups, share what sports, if any, you participate in?
2. Identify what is happening to your skin when you are participating in indoor sports?  
Outdoor sports?
3. Compare & contrast indoor and outdoor skin changes.  
**Let the students discuss their sports and what if any skin conditions have plagued them.**
4. You will be working in pairs or small groups for this activity. Use this resource [Skin and Sports Activity](#) to answer the following questions about football, running, skiing, swimming and tennis.  
**Determine if your students will be doing this activity in pairs or in small groups of 2-3.**
  - a. What environmental factors or physical agents can create problems for the players' skin?
  - b. What are the potential risks these 5 sports pose to healthy skin?
  - c. How can you avoid the risks that these sports pose?
  - d. What can you do to protect your skin while playing any of these sports?
2. Discuss within your group / class your findings to 4 a. - d above.  
**Facilitate your students with the discussion of the above 4 questions.**
3. Your pair or group will now complete the "student skin and sports student sheet".  
[Skin and Sports Trainer Sheet](#)
4. After your group has completed the Trainer sheet, create a poster to display your research as well as your list of Dos and Don'ts

Depending on your class size and time, you can decide to have students work in pairs and complete a Trainer Sheet for each of the 5 sports or you can create 5 small groups and assign each group a different sport. If you decide to have each group complete all 5 sports, assign each group a different sport for them to create the poster of their research and list of Do's and Don'ts.

You may choose how you want your students to create the Sports poster depending on the resources available to you. Possible options are using sheets of 8 x 10 white or colored paper or using butcher paper to create larger posters with various coloring utensils, or allow the students to use a digital platform (Google docs and Word have poster templates, or any other application students have access to through your school) to create and share their posters.

Allow time for discussion after this activity. It should generate quite a bit of discussion between the students. Let them explore these very real risks to their skin.

Resource link to the above activities: [Skin and Sports Lesson and Activities](#)

**5. Evaluate:**

1. Post-test with comparison to pre-test achievement. Improvement expected.  
 You will set the performance parameters to determine if your students achieved your expected learning outcomes.
2. Evaluation of Sports poster: Your teacher may use the following rubric to assess your poster project

	Excellent pts 4	Proficient 3pts	Fair 2pts	Needs Improvement 1pt	Missing pts 0
Overall presentation	Project is: 1. Interesting 2. Educational 3. Relevant 4. Addresses the main topic	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing four characteristics from excellent category
Content	Poster includes: 1. At least 2 environmental factors or physical agents that can cause problems for players' skin 2. Potential risks this sport poses on skin. 3. Recommendations on how to avoid potential risks 4. At least 3 Dos and 3 Don'ts for skin protection while playing this sport.	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing more than three characteristics from excellent category

Organization	<p>Project:</p> <ol style="list-style-type: none"> <li>1. Uses appropriate language</li> <li>2. Has images and/or graphics relate well to content</li> <li>3. Has continuous progression of ideas</li> <li>4. Is well documented and organized</li> </ol>	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing four characteristics from excellent category
Use of Medical Terminology	<p>Medical terminology:</p> <ol style="list-style-type: none"> <li>1. Used proper and appropriate terms relating to the topic</li> <li>2. All medical terms spelled correctly</li> <li>3. All medical terms pronounced correctly</li> <li>4. Meanings of all medical terms are present within the text</li> </ol>	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing four characteristics from excellent category

- Score of 12-16 (75% or above): students have a firm grasp on the content of this lesson. Followed the rubric closely.
- Score of 1-11 (68% or below): you need to have a remediation plan for these students. Review the rubric closely and allow them to repeat. (if it is possible for you to make this accommodation)

**Extra credit:**

1. What skin conditions do players in close contact sports (such as wrestling) have?
  - a. Name one condition
  - b. Explain how it affects the skin
  - c. what can be done to prevent the condition
  - d. What is done to treat the condition.

**NOTE:** The sport selected for extra credit cannot be one of the 5 sports addressed previously.

Conditions of contact sports such as wrestling and soccer, football, etc are:

- a. warts
- b. scabs
- c. head lice
- d. conjunctivitis
- e. bacterial skin infections
- f. herpes simplex virus
- g. athlete's foot
- h. jock itch
- i. ringworm.

Prevention includes

- a. good hygiene and showers
- b. clean and dry clothes
- c. not using sweaty clothes and shoes.

Treatment may include

- a. Over the counter medications for jock itch, athlete's foot and head lice.
- b. Doctor's treatment might be needed for herpes simplex, warts etc.

## Pre & Post Quiz

1. What is the meaning of the medical term *epidermal*?
  - a. Pertaining to below the skin
  - b. Pertaining to the upon the skin
  - c. Pertaining to the skin
2. If you have ever experienced a “sunburn” in the past, what layer of skin did you damage?
  - a. Dermis
  - b. Epidermis
  - c. Subcutaneous tissue
  - d. Muscle
3. What layer of the skin contains fat to help insulate the body?
  - a. Subcutaneous
  - b. Epidermis
  - c. Dermis
4. What prefix should be added to the medical term *dermis* to create a term that means *below the skin*?
  - a. Epi-
  - b. Hyper-
  - c. Hypo-
  - d. Endo-
5. Does your skin actually regulate your body’s temperature?
  - a. Yes
  - b. No
  - c. Maybe
6. Does your skin actually make Vitamin D when exposed to the sun?
  - a. Yes
  - b. No
  - c. Maybe
7. What layer of skin actually has blood vessels, hair follicles, nerves, sweat glands?
  - a. Dermis
  - b. Epidermis
  - c. Subcutaneous tissue
  - d. Muscle
8. Which accessory structure creates oil?
  - a. Sebaceous glands
  - b. Sweat glands
  - c. Hair follicles
  - d. Sensory receptors
9. What is the root word in the medical term *subcutaneous*?
  - a. sub-
  - b. cutane-
  - c. -ous
10. What layer of the epidermis contains living and dividing cells?
  - a. Stratum corneum
  - b. Stratum lucidum
  - c. Stratum granulosum
  - d. Stratum spinosum
  - e. Stratum basale



## **ENGAGE Optional activity narrative:**

- 1. Without using your textbook or any other resource, draw a model of the skin based on the following narrative:**

The outermost layer of the skin is known as the epidermis. It is composed of keratinized, stratified squamous epithelium. The epidermis is made up of 4-5 distinct layers of epithelial cells, depending on the location. "Thin skin" is made of 4 distinct layers of cells and makes up the epidermis of most of the body. From deep to superficial, the 4 layers are the stratum basale, stratum spinosum, stratum granulosum, and stratum corneum. The epidermis is avascular, meaning it does not contain blood vessels.

Below the epidermis is the dermis layer which is the thickest layer of the skin. This layer contains many of the skin's accessory structures. The base of the hair follicle originates in the dermal layer, extends through the epidermis, and opens to allow the hair to exit the skin. Two structures are attached to each hair follicle: a sebaceous gland and the arrector pili muscle. The sebaceous gland creates sebum, or oil, which is secreted through a duct into the hair follicle. The oil coats and protects the hair. The arrector pili muscle is attached to the base of the hair follicle and contracts to cause the hair stand up, commonly known as goosebumps. Also present in the dermal layer are sweat glands which have ducts that carry sweat to the surface of the skin. Sweat exits through small openings known as pores. Lastly, the dermis contains blood vessels as well as many specialized nerves known as sensory receptors.

The deepest layer, located below or under the dermis, is called the hypodermis or the subcutaneous layer. This layer consists of loose connective tissue known as adipose tissue or fat which acts as insulation to help conserve body heat.

## Skin Terms Deconstruction Worksheet

Directions: Deconstruct the following medical terms into their word elements and identify the meaning of each word element. If a medical term cannot be deconstructed, provide the Greek or Latin meaning of the word.

1. Integumentary

a. Root word:

b. Suffix:

---

2. Epithelial

a. Prefix:

b. Root word:

c. Suffix:

---

3. Cutaneous

a. Root word:

b. Suffix:

---

4. Subcutaneous

a. Prefix:

b. Root word:

c. Suffix:

---

5. Epidermis

a. Prefix:

b. Root word:

c. Suffix:

---

6. Stratum

a. Root word:

b. Suffix:

---

7. Basale

a. Translation:

---



8. Lucidum

a. Root word:

b. Suffix:

---

9. Granulosum

a. Root word:

b. Suffix:

---

10. Spinosum

a. Root word:

b. Suffix:

---

11. Dermis

a. Root word:

b. Suffix:

---

12. Papillae

a. Translation:

---

13. Follicle

a. Translation:

---

14. Arrector

a. Root word:

b. Suffix:

---

15. Sebaceous

a. Root word:

b. Suffix:

---

16. Keratin

a. Root word:

b. Suffix:

---

17. Melanin

- a. Root word:
- b. Suffix:

---

18. Sudoriferous

- a. Root word:
  - b. Root word:
  - c. Suffix:
-

## Explore Part II (Cards for matching activity) Steps 1-3

### Skin structures & Appendages for matching cards

What is the epidermis?	outermost layer of the skin containing dead cells
What is the dermis?	thick layer of skin beneath the outermost layer containing several accessory structures
What is the hair follicle?	Structure responsible for producing the hair
What is the function of sebaceous glands?	produce and secrete oil to coat and protect the hair
What is the function of sudoriferous glands?	Produce and secrete sweat when internal body temperature is elevated
What is the function of the arrector pili muscle?	Contracts to make hair stand up, usually as a response to decrease in internal body temperature.
What is the function of the sensory receptors?	Detection of touch, pressure, pain and temperature
What is the purpose of dermal blood vessels?	nutrient/waste exchange and temperature regulation
What is the function of the hypodermis layer? (or subcutaneous layer)	stores fat, protects from mechanical injuries, connects skin to muscle and bones
What is the purpose of fingernails?	cover and protect the distal ends of the fingers and toes
What is the function of the stratum basale layer?	contains living cells that divide and travel to the surface of the skin
What is the stratum corneum?	outermost layer of the epidermis, containing keratinized, dead cells
What areas of the body have skin that contains the stratum lucidum layer?	palms and soles of the feet
What is keratin?	hard fibrous protein found in epidermal cells, hair and nails
What is melanin?	dark or brown pigmented protein that absorbs UV light from the sun

## Explore Part II: #4-7

### Matching Activity for the Integumentary System

Name\_\_\_\_\_

Class\_\_\_\_\_

Date\_\_\_\_\_

#### Directions:

Match the term in Column A with the appropriate description in Column B.

Write the correct letter on the line provided.

Column A	Column B
1. ____ Arrector pili	A. outermost layer of dead, keratinized cells
2. ____ Sudoriferous glands	B. detect sensations of touch, pressure, pain, and temperature
3. ____ Epidermis	C. adipose layer
4. ____ Sensory receptors	D. they produce a thick, oily substance
5. ____ Dermal blood vessels	E. small tubular structures that produce sweat
6. ____ Stratum corneum	F. extra layer of skin only found on palms and soles of the feet
7. ____ Sebaceous glands	G. tube-like depression responsible to producing the hair
8. ____ Hair follicle	H. layer of living cells that divide and travel to the surface of the skin
9. ____ Nails	I. smooth muscle causing "goosebumps"
10. ____ Keratin	J. protect distal ends of fingers and toes
11. ____ Stratum basale	K. considered the true layer of skin; contains accessory structures
12. ____ Dermis	L. can have a black, brown or yellow tint
13. ____ Subcutaneous/hypodermis	M. outermost layer of skin
14. ____ Stratum lucidum	N. nonliving hard protein substance
15. ____ Melanin	O. transports nutrients and waste to/from the dermis

## Answer Keys

### Pre test

1. b - pertaining to upon the skin
2. a - epidermis. (A sunburn can be considered a 1st degree burn)
3. a - subcutaneous
4. c - hypo-
5. a - yes
6. a - yes ( when skin is exposed to the sun, it can manufacture its own Vitamin D)
7. a - dermis
8. a - sebaceous
9. b - cutane-
10. e - Stratum basale

### Matching Worksheet for the Integumentary System

- A. I
- B. E
- C. M
- D. B
- E. O
- F. A
- G. D
- H. G
- I. J
- J. N
- K. H
- L. K
- M. C
- N. F
- O. L

## Skin Terms Deconstruction Worksheet **ANSWER KEY**

Directions: Deconstruct the following medical terms into their word elements and identify the meaning of each word element. If a medical term cannot be deconstructed, provide the Greek or Latin meaning of the word.

1. Integumentary
  - a. Root word: **integument-** skin or covering (meaning may vary depending on which text or resource you utilize)
  - b. Suffix: **-ary** - pertaining to
2. Epithelial
  - a. Prefix: **epi** - upon
  - b. Root word: **thelio** - cellular layer
  - c. Suffix: **-al** - pertaining to
3. Cutaneous
  - a. Root word: **cutane-** skin
  - b. Suffix: **-ous** - pertaining to
4. Subcutaneous
  - a. Prefix: **sub-** - below or under
  - b. Root word: **cutane-** - skin
  - c. Suffix: **-ous-** - pertaining to
5. Epidermis
  - a. Prefix: **epi-** - upon
  - b. Root word: **derm-** - skin
  - c. Suffix: **is-** - pertaining to or belonging to (meaning may vary depending on which text or resource you utilize)
6. Stratum
  - a. Root word: **strat-** - layer
  - b. Suffix: **-um** - structure
7. Basale
  - a. Translation: **deepest part**
8. Lucidum
  - a. Root word: **lucid-** clear
  - b. Suffix: **-um** - structure

9. Granulosum

a. Root word: **granul** - small grain

b. Suffix: **-um** - structure

10. Spinosum

a. Root word: **spin-** spiny

b. Suffix: **um-** structure

11. Dermis

a. Root word: **derm-** skin

b. Suffix: **-is** pertaining to or belonging to (meaning may vary depending on which text or resource you utilize)

12. Papillae

a. Translation: **elevated structure**

13. Follicle

a. Translation: **small sac**

14. Arrector

a. Root word: **arrect-** raise

b. Suffix: **-or** - person or thing that produces or does

15. Sebaceous

a. Root word: **sebac-** sebum; oil

b. Suffix: **-ous** - pertaining to

16. Keratin

a. Root word: **kerat** - hard; fibrous

b. Suffix: **-in** - substance

17. Melanin

a. Root word: **melan** - black

b. Suffix: **-in** - substance

18. Sudoriferous

a. Root word: **sudori** - sweat

b. Root word: **fer** - to bear

c. Suffix: **-ous** - pertaining to

Notes:

All ILCTE lessons are vetted by Curriculum Leader, Dr. Brad Christensen.

To see a review of this lesson by previous users, [click here](#).

We invite users of this lesson to [click here](#) to leave follow up information and rating.

We would like to publish pictures / videos of your students using this lesson. Please send to Rod McQuality at: [rdmcquality@ilstu.edu](mailto:rdmcquality@ilstu.edu). By sending pictures, you have met all the picture / video release for your school.

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# **Medical Terminology: Introduction To The Integumentary System**

*Student Edition*

**Overview:**

Learn the many miraculous things that your skin does for you! Through various activities including a skin poster, you will learn all the things that the largest organ in your body does to protect you and keep you healthy.

**Learning Objectives:**

- Explain the functions of the skin.
- Differentiate between the layers of the skin: epidermis, dermis, hypodermis.
- Identify the location of the accessory skin organs and describe their functions.
- Interpret medical terms of dermatology for verbal and written communication in a health care setting.
- Use word elements to construct medical terms associated with dermatology.
- Deconstruct medical terms associated with dermatology into their word elements.

**Enduring Understandings:**

- Knowledgeable with medical terminology for future health career careers and courses.
- Correlate knowledge necessary for career in healthcare fields.
- Ability to communicate with healthcare professionals if they are ever a patient themselves.
- Document safe quality patient care related to dermatology.
- Interpret medical records during health encounters.

**Resources and References:**

1. Device with internet connectivity
2. Letter size paper or butcher paper for Sports poster (colored and white)
3. Colored pencils, pens &/or markers
4. Videos:
  - [My life without skin](#) (9+ minutes)
  - [Kids Health: Skin \(6:28\)](#)
5. Website
  - [Word It Out](#)
6. Tissue as the 2 videos being shown are very powerful and emotional.
7. [Skin Coloring Diagram](#)  
Kapit, W., & Elson, L. (1977) *The Anatomy Coloring Book*. N.Y., NY: Harper and Row
8. [Skin and Sports Trainer Sheet](#)
9. [Skin and Sports Lesson and Activities](#)

**Essential Employability Skills:**

There are four [essential employability skills](#)

- Personal Ethic: integrity, respect, perseverance, positive attitude
- Work Ethic: dependability, professionalism
- Teamwork: critical thinking, effective and cooperative work
- Communication: active listening, clear communication

The focus of this lesson is on critical thinking, effective and cooperative work, active listening and clear communication.

Skill	How it is addressed:
Critical Thinking	Asking students to "think" how they would feel if born without any skin. How would their life, environment, etc. have to change to accommodate this condition? <b>Engage: Option 2, 3 &amp; 4</b>
Effective and Cooperative Work	Working in pairs or small groups requires each member to be cooperative and work effectively with each other. <b>Explore Part I &amp; II</b> <b>Elaborate</b>
Active Listening	Students will demonstrate their ability to listen & follow directions correctly. <b>Engage Option 1</b> <b>Explore Part II 3</b>
Clear Communication	Clear communication within their pair or group during activities. This will help facilitate collaboration within the pair or group. <b>Engage Option 2 #3</b> <b>Explore Part I (skin exploration lab)</b> <b>Explore Part II (match structure to function)</b> <b>Elaborate: Poster</b>

## **1. Engage:**

### **Part 1**

1. You will now take a pre-lesson quiz. Do your best!

### **Part 2**

#### **Option 1:**

1. You are going to watch a very emotional video, please take a few minutes to prepare yourself for experience that you may encounter when you enter the health care pathway. Watch [My life without skin](#) (9+ minutes) on your device or together as a class.
2. Take notes and be prepared to share your feelings on the following:
  - a. Imagine yourself with no skin.
  - b. What would it feel like to not have any skin on your body?
  - c. What daily habits or routines would you have to change?
  - d. What would you have to do to adapt to your environment?
  - e. What changes would you need to make in your environment?
3. Now take turns coming to the whiteboard. Pick one question from the list below and write one sentence on how this would feel if it was YOU.
  - a. What changes would you need to make?
  - b. Is it life-limiting?
  - c. How would you cope?
  - d. Family support? What would you need from your family to survive?

#### **Option 2:**

1. Watch this animated video about the integumentary system:  
[Kids Health: Skin \(6:28\)](#)
2. While watching the video, write down at least 5 medical terms you hear.
3. Once the video is over, you will work in groups of 2-3 to compare and contrast the terms you have identified and list them on the worksheet provided to your group.
4. After you have created the list of all the terms, deconstruct each term to identify the word elements: prefixes, root words, and suffixes. Using your textbook, provide the meaning of each word element.
5. After each group has finished compiling their list of medical terms, you will share your list with the rest of the class to identify the most commonly identified medical terms from the video.

### **Additional optional activities to use at teacher discretion:**

#### **Option 1:**

1. You are going to draw a model of the skin by reading a description and without using any other resources.

## Option 2:

1. Working in pairs, one student will be doing the drawing of a skin diagram based on how your partner verbally describes it.
2. The partner describing the skin diagram will have a narrative and picture for the skin drawing given to them by your teacher or located in their textbook.
3. The partner doing the drawing will NOT see a picture but must draw the skin diagram based on their partner's descriptions.

## 2. Explore:

### Part I:

1. You will color a diagram of the skin. Read steps 1 and 2 on the coloring page before you begin as it provides specific instructions about what colors you should use for certain skin structures.
2. Color each word with the same color you used to color the structure on the diagram.
3. Once you have colored the diagram, use your textbook and/or additional resources to deconstruct the medical terms, provide the meaning of the word elements, and research the function of each of the skin structures.

### [Skin Coloring Diagram](#)

Kapit, W., & Elson, L. (1977). *The Anatomy Coloring Book*. N.Y., NY: Harper and Row.

### Part 2

1. You will receive a piece of colored paper either indicating a skin structure or the function/description of a specific skin structure. Each student will receive a different structure or function. You must locate the student whose slip matches your structure or function. You can travel around the room to make your matches. Once you have found your match, confirm with your teacher.
2. Now that you have found your match, you will be partnered together for the next activity.
3. You will each be given a worksheet to complete for this next activity.
4. Once all students have found their match, one student from each pair will form an outer circle and the other students will form an inner circle, being sure to sit directly across from your partner.
5. Now enter your pair's information onto your worksheet.
6. When prompted by the teacher, students in the outer circle will move one chair to their left. Now you will be matched up with a new student and you will be given one minute to share your structure and its function. Enter the new information onto your worksheet.
7. The outer circle will continue to move until the entire worksheet is complete.

### **3. Explain:**

#### **Part I:**

1. Working with a partner, choose 2 terms that you can now easily relate to the Integumentary System and deconstruct both terms into their word elements. Be prepared to go to the whiteboard, write your 2 terms and how you deconstructed the terms. Once your words are displayed, share 1 reason why they are easier for you to relate to this lesson. Try not to duplicate any of your classmates' answers.

#### **Part 2:**

1. On a sheet of paper, answer the following questions:
  - a. What are 3 of the functions of the dermis?
  - b. Identify the structures related to these functions of the dermis.
2. Once all students have completed the questions, pass your piece of paper to the person sitting on your right. As a class, review your answers.
3. Using your worksheet, review and verify your classmates' responses.
4. If something is incorrect, give that student the correct answer.

### **4. Elaborate/Extend:**

#### **Pre-activity Discussion/Brainstorm :**

1. In pairs or small groups, share what sports, if any, you participate in?
2. Identify what is happening to your skin when you are participating in indoor sports?  
Outdoor sports?
3. Compare & contrast indoor and outdoor skin changes.
4. You will be working in pairs or small groups for this activity. Use this resource [Skin and Sports Activity](#) to answer the following questions about football, running, skiing, swimming and tennis.
  - a. What environmental factors or physical agents can create problems for the players' skin?
  - b. What are the potential risks these 5 sports pose to healthy skin?
  - c. How can you avoid the risks that these sports pose?
  - d. What can you do to protect your skin while playing any of these sports?
5. Discuss within your group / class your findings to 4 a. - d above.
6. Your pair or group will now complete the "student skin and sports student sheet".  
[Skin and Sports Trainer Sheet](#)
7. After your group has completed the Trainer sheet, create a poster to display your research as well as your list of Dos and Don'ts

**5. Evaluate:**

1. Post-test with comparison to pre-test achievement. Improvement expected.
2. Evaluation of Sports poster: Your teacher may use the following rubric to assess your poster project

	Excellent 4 pts	Proficient 3pts	Fair 2pts	Needs Improvement 1pt	Missing pts 0
Overall presentation	Project is: <ol style="list-style-type: none"> <li>1. Interesting</li> <li>2. Educational</li> <li>3. Relevant</li> <li>4. Addresses the main topic</li> </ol>	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing four characteristics from excellent category
Content	Poster includes: <ol style="list-style-type: none"> <li>1. At least 2 environmental factors or physical agents that can cause problems for players' skin</li> <li>2. Potential risks this sport poses on the skin</li> <li>3. Recommendations on how to avoid potential risks</li> <li>4. At least 3 Dos and 3 Don'ts for skin protection while playing this sport.</li> </ol>	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing more than three characteristics from excellent category

Organization	<p>Project:</p> <ol style="list-style-type: none"> <li>1. Uses appropriate language</li> <li>2. Has images and/or graphics relate well to content</li> <li>3. Has continuous progression of ideas</li> <li>4. Is well documented and organized</li> </ol>	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing four characteristics from excellent category
Use of Medical Terminology	<p>Medical terminology:</p> <ol style="list-style-type: none"> <li>1. Used proper and appropriate terms relating to the topic</li> <li>2. All medical terms spelled correctly</li> <li>3. All medical terms pronounced correctly</li> <li>4. Meanings of all medical terms are present within the text</li> </ol>	Missing one characteristic from excellent category	Missing two characteristics from excellent category	Missing three characteristics from excellent category	Missing four characteristics from excellent category

**Extra credit:**

1. What skin conditions do players in close contact sports (such as wrestling) have?
  - a. Name one condition
  - b. Explain how it affects the skin
  - c. what can be done to prevent the condition
  - d. What is done to treat the condition.